

IN THE CLAIMS

Please amend the claims as follows.

For the Examiner's convenience, a list of all claims is included below.

-
1. (Currently amended) A thermal interface material, comprising:
- a binder material;
- a fusible filler ~~randomly positioned~~ within the binder material, the fusible filler randomly positioned with respect to the binder material; and
- a plurality of non-fusible particles ~~randomly positioned~~ having a mean diameter of approximately 25 microns, within the binder material, the non-fusible particles randomly positioned with respect to the binder material.
2. (Cancelled)
3. (Previously presented) The thermal interface material of claim 1, wherein the fusible filler is pre-coated onto each of the non-fusible particles prior to addition into the binder material.
4. (Cancelled)
5. (Previously presented) The thermal interface material of claim 1, wherein a thermal conductivity of the non-fusible particles is greater than a thermal conductivity of the fusible filler.

6. (Previously presented) The thermal interface material of claim 1, wherein the binder material is a polymer.
7. (Previously presented) The thermal interface material of claim 1, wherein the binder material acts as an adhesive.
8. (Currently amended) The thermal interface material of claim ~~2~~ 1, wherein the non-fusible particles are selected from the group consisting of ceramic fiber, graphite fibers, carbon fibers, aluminum oxides, zinc oxide, aluminum, boron nitride, silver, graphite, carbon fibers, diamond, metal coated carbon fiber, and metal coated diamond.
9. (Previously presented) The thermal interface material of claim 1, wherein the fusible filler is a solder alloy having a solidus temperature above 100° C.
10. (Previously presented) The thermal interface material of claim 1, wherein a combined weight of the fusible filler and the non-fusible particles is in a range of approximately 50 - 99% by weight of the total weight of the thermal interface material.
11. (Previously presented) The thermal interface material of claim 1, wherein the fusible filler is 60 – 90% by weight of the total weight of the thermal interface material.
12. (Previously presented) The thermal interface material of claim 3, wherein the non-fusible particles are in a range of approximately 5 – 49% by weight of the total weight of the thermal interface material.

13. (Previously presented) The thermal interface material of claim 3, wherein a volume percent of fusible filler to non-fusible particles is in a range of approximately 5 – 95 volume % fusible filler.

14. (Currently amended) The thermal interface material of claim ~~2~~ 1, wherein a volume percent of fusible filler to non-fusible particles is in a range of approximately 10 – 50 volume % fusible filler.

15. (Previously presented) The thermal interface material of claim 1, wherein the fusible filler has a melting temperature of approximately between 100 - 250° C.

16. (Previously presented) The thermal interface material of claim 1, wherein the fusible filler is stable to oxygen at temperatures up to approximately 150° C and relative humidity up to approximately 90%.

17. (Previously presented) The thermal interface material of claim 1, wherein the fusible filler is selected from the group consisting of indium based solders and tin based solder.

18. (Cancelled)

19. (Currently amended) The thermal interface material of claim ~~2~~ 1, wherein a diameter for a non-fusible particle can be approximately 25 microns.

20-25 (Cancelled)

26. (Currently amended) The thermal interface material of claim 1, wherein the non-fusible particles comprise a plurality of ~~irregularly~~ non-uniformly shaped particles.

27. (Previously presented) The thermal interface material of claim 9, wherein the solder alloy has a solidus temperature below 250° C.

B' 28. (Currently amended) The thermal interface material of claim 1, wherein the ~~binding~~ thermal interface material is non-adhesive.

29. (Cancelled)

30. (New) A thermal interface material, comprising:

a binder material;

a fusible filler within the binder material, the fusible filler randomly positioned with respect to the binder material; and

a plurality of non-fusible particles within the binder material, the non-fusible particles randomly positioned with respect to the binder material, wherein at least a portion of the non-fusible particles are comprise a non-electrically conductive material.

31. (New) The thermal interface material of claim 30 wherein the portion of the non-fusible particles comprising a non-electrically conductive material comprises a material selected from the group consisting of ceramic fiber, graphite fibers, carbon fibers, aluminum oxides, zinc oxide, boron nitride, graphite, carbon fibers, and diamond.